TEST RESULTS OF GRADATION FOR WMM

Lab ID	:	**CP-RW-2019-08-01-03** **Date: 12-07-19**
Customer	:	Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Address	:	Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Project Name	:	Providing Pothole Filling in Ward No.03.
Agency	:	M/S S.M.L.P. Asphalts Prop.BB Umesh, No:385, Bettahalasuru Post, Bangalore North.
Customer Reference	:	EE(YNK.D)E-PMT-03/W.O/60/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	10-07-19
Type of Mix	:	WMM (Wet Mix Macadam)
Date of test	:	10-07-19
Oven Dry Weight	:	11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	304	304	2.8	97.2	95-100
22.4	2245	2549	23.2	76.8	60-80
11.2	2169	4718	42.9	57.1	40-60
4.75	2248	6966	63.3	36.7	25-40
2.36	1618	8584	78.0	22.0	15-30
0.6	616	9200	83.6	16.4	8-22
0.075	1329	10529	95.7	4.3	0-5

Note:-

The results pertain to the samples received and tested.
All information Furnished by Customer/ Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 90 days from the date of issue of test certificate

CIVIL Pro Sig..... Date..... BANGALORE

FOR CIVIL Pro.
R RUDRAPRASAD
Authorized Signatory
Technical Manager

Page 1/1
End of Report

CIVIL PRO
AN ISO 9001 : 2008 COMPANY &NABL ACCREDITED LABORATORY AS PER ISO/IEC 17025:2005
4, 7TH MAIN MALLESWARAM, BANGALORE -3

Format No: CP/TF/01

TEST REPORT ON BITUMEN

Lab ID	:	**CP-RW-2019-08-01-03** **Date: 18-07-19**
Customer	:	Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Address	:	Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Project Name	:	Providing Pothole Filling in Ward No.03.
Agency	:	M/S S.M.L.P. Asphalts Prop.BB Umesh, No:385, Bettahalasuru Post, Bangalore North.
Customer's Reference	:	EE(YNK.D)E-PMT-03/W.O/60/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	17-07-19
Sample Type	:	Bitumen
Reference to BIS codes	:	IS: 1201-1220(1978) (Reaffirmed-2004)
Date of test	:	17-07-19

Test Results

Sl.no	Name of Test	Result	Requirements as per IS:73-2013
1	Penetration at 25°C , in 1/10th mm	66	60 to 70
2	Softening Point, °C	51.6	Min. 40°C
3	Ductility, cm	99	Min. 75cm
4	Flash point, °C	248	Min. 220°C
	Fire point, °C	274	

Note:-

The results pertain to the samples received and tested.
All information Furnished by Customer/ Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 90 days from the date of issue of test certificate

ಸಹಾಯಕ ಕಾರ್ಯ ಪರಿಪಾಲಕ ಅಭಿಯಂತರ ಉಪನಗರ ಉಪವಿಭಾಗ, ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-105

FOR CIVIL Pro.

CIVIL Pro Sig..... Date..... BANGALORE

R RUDRAPRASAD
Authorized Signatory
Technical Manager

****End of Report****

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com
HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL

CIVIL PRO
AN ISO 9001 : 2008 COMPANY &NABL ACCREDITED LABORATORY AS PER ISO/IEC 17025:2005
4, 7TH MAIN MALLESWARAM, BANGALORE -3

TEST RESULTS OF GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2007)

Lab ID	:	**CP-RW-2019-08-01-03** **Date: 24-07-19**
Customer	:	Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Address	:	Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Project Name	:	Providing Pothole Filling in Ward No.03.
Agency	:	M/S S.M.L.P. Asphalts Prop.BB Umesh, No:385, Bettahalasuru Post, Bangalore North.
Customer Reference	:	EE(YNK.D)E-PMT-03/W.O/60/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	22-07-19
Type of Mix	:	BC-Plant (Bituminous Concrete)
Date of test	:	22-07-19
Oven Dry Weight	:	5000 Grams

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-17(grading-2)
19	0	0	0.0	100.0	100
13.2	84	84	1.7	98.3	90-100
9.5	709	793	15.9	84.1	70-88
4.75	890	1683	33.7	66.3	53-71
2.36	581	2264	45.3	54.7	42-58
1.18	499	2763	55.3	44.7	34-48
0.6	508	3271	65.4	34.6	26-38
0.3	516	3787	75.7	24.3	18-28
0.15	446	4233	84.7	15.3	12-20
0.075	349	4582	91.6	8.4	4-10
PAN	418	5000	100	0.0	0

Note:-
The results pertain to the samples received and tested.
All information Furnished by Customer/ Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 90 days from the date of issue of test certificate

CIVIL Pro Sig Date BANGALORE

FOR CIVIL Pro.
R RUDRAPRASAD
Authorized Signatory
Technical Manager

Page 1/1
End of Report

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com
HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL

CIVIL PRO
AN ISO 9001 : 2008 COMPANY &NABL ACCREDITED LABORATORY AS PER ISO/IEC 17025:2005
4, 7TH MAIN MALLESWARAM, BANGALORE -3

TEST REPORT OF AGGEGRATE STRIPPING VALUE OF ROAD AGGRGATE (IS:6241)

Lab ID	:	**CP-RW-2019-08-01-03** **Date: 25-07-19**
Customer	:	Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Address	:	Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Project Name	:	Providing Pothole Filling in Ward No.03.
Agency	:	M/S S.M.L.P. Asphalts Prop.BB Umesh, No:385, Bettahalasuru Post, Bangalore North.
Customer Reference	:	EE(YNK.D)E-PMT-03/W.O/60/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	22-07-19
Type of Mix	:	BC(Bitumenous Concrete)
Date of test	:	22-07-19

Type of Binder	:	60/70
% of Binder Used	:	5.0%
Weight of Aggregate	:	200.0 gm
Weight of Binder	:	10.0 gm
Temperature of water bath	:	40°C

No of test	Retained Stripping Percentage	Stripping Percentage	Average Retained Stripping Percentage	Secified limits as per MORTH specification table 500-8
1	98.0	2.0	98.2	Minimum Retained Coating 95%
2	98.5	1.5		
3	98.0	2.0		

Note:-
The results pertain to the samples received and tested.
All information Furnished by Customer/ Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 90 days from the date of issue of test certificate

FOR CIVIL Pro.

CIVIL Pro Sig Date BANGALORE

R RUDRAPRASAD
Authorized Signatory
Technical Manager

Page 1/1
****End of Report****

PHYSICAL REQUIREMENTS FOR COARSE AGGREGATE FOR BITUMINOUS CONCRETE

Lab ID	:	**CP-RW-2019-08-01-03**
Customer	:	Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore. **Date: 25-07-19**
Address	:	Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Project Name	:	Providing Pothole Filling in Ward No.03.
Agency	:	M/S S.M.L.P. Asphalts Prop.BB Umesh, No:385, Bettahalasuru Post, Bangalore North.
Customer Reference	:	EE(YNK.D)E-PMT-03/W.O/60/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	22-07-19
Type of Mix	:	BC (Bituminous Concrete)
Date of test	:	22-07-19

Table 500-16 : Physical Requirements fo Coarse Aggregate for Bituminous Concrete

Property	Test	Result	Specification	Method of Test
Partical Shape	Flakiness Index	12.2	Combined Flakiness & Elongation Index for BC is Maximum 35%	IS:2386 Part I
	Elongation Index	11.6		
Strength	Aggregate Impact Value	22.3	Maximum 24%	IS:2386 Part IV
Specific gravity	Specific gravity	2.66	Maximum 2.7	IS:2386 Part III
Water Absorption	Water Absorption	0.23	Maximum 2%	IS:2386 Part III

Note:-
The results pertain to the samples received and tested.
All information Furnished by Customer/ Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 90 days from the date of issue of test certificate

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರ
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ,
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-106

FOR CIVIL Pro.

CIVIL Pro * Sig..... Date..... BANGALORE

R RUDRAPRASAD
Authorized Signatory
Technical Manager

End of Report

TESTS RESULTS ON STABILITY OF MIX

Lab ID	:	**CP-RW-2019-08-01-03** **Date: 25-07-19**
Customer	:	Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Address	:	Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Project Name	:	Providing Pothole Filling in Ward No.03.
Agency	:	M/S S.M.L.P. Asphalts Prop.BB Umesh, No:385, Bettahalasuru Post, Bangalore North.
Customer Reference	:	EE(YNK.D)E-PMT-03/W.O/60/2019-20
Source of Sample	:	Hot Mix Plant, Bangalore
Sample Condition	:	Satisfactory
Date of Receipt	:	22-07-19
Type of Mix	:	BC (Bituminous Concrete)
Date of test	:	22-07-19

The results of the tests conducted on the Bituminous Concrete mix sample are as follow

Sl.No	Particulars of observations	TEST 1	TEST 2	Secified limits as per MORTH specification table 500-11
1	Marshal Stability at 60°C, KN	11.15	11.14	10KN(min)
2	Marshal flow at 60°C, mm	3.54	3.53	2-4
3	Percent air Voids	4.84	4.85	3-5
4	Percent Voids in mineral Aggregate(VMA %)	14.26	14.28	13-15
5	Percent Voids filled with Bitumen(VFB %)	71.85	71.61	65-75
6	Density, g/cc	2.23	2.24	–

Note:-

The results pertain to the samples received and tested.
All information Furnished by Customer/ Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 90 days from the date of issue of test certificate

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ,
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-106

FOR CIVIL Pro.
R RUDRAPRASAD
Authorized Signatory
Technical Manager

CIVIL PRO BANGALORE Sig Date

Page 1/1
End of Report

TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2011)

Lab ID : **CP-RW-2019-08-01-03** **Date: 31-07-19**

Customer : Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.

Address : Yelahanka Satellite Town Sub Division, BBMP, Bangalore.

Project Name : Providing Pothole Filling in Ward No.03.

Agency : M/S S.M.L.P. Asphalts Prop.BB Umesh, No:385, Bettahalasuru Post, Bangalore North.

Customer Reference : EE(YNK.D)E-PMT-03/W.O/60/2019-20

Source of Sample : Sample supplied by Agency

Date of Receipt : 29-07-19

Type of Mix : BC (Bituminous Concrete)

Date of test : 29-07-19

SLno	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	A	500	500
2	Weight of the sample After extraction	B	469	470
3	Bitumen percentage	$\frac{A-B}{A} \times 100$	6.20	6.00
4	Average percentage	%	6.1	

FOR CIVIL Pro.

CIVIL Pro Sig..... Date..... BANGALORE

R RUDRAPRASAD
Authorized Signatory
Technical Manager

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

CIVIL PRO
AN ISO 9001 : 2008 COMPANY &NABL ACCREDITED LABORATORY AS PER ISO/IEC 17025:2005
4, 7TH MAIN MALLESWARAM, BANGALORE -3

Lab ID : CP-RW-2019-08-01-03

Date: 31-07-19

AFTER EXTRACTION - Trail-1

Total Weight of the Sample(gm) : 469

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	5	5	1.1	98.9	90-100
9.5	66	71	15.1	84.9	70-88
4.75	109	180	38.4	61.6	53-71
2.36	81	261	55.7	44.3	42-58
1.18	21	282	60.1	39.9	34-48
0.6	19	301	64.2	35.8	26-38
0.3	39	340	72.5	27.5	18-28
0.15	46	386	82.3	17.7	12-20
0.075	45	431	91.9	8.1	4-10

AFTER EXTRACTION - Trail-2

Total Weight of the Sample(gm) : 470

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	5	5	1.1	98.9	90-100
9.5	64	69	14.7	85.3	70-88
4.75	113	182	38.7	61.3	53-71
2.36	89	271	57.7	42.3	42-58
1.18	21	292	62.1	37.9	34-48
0.6	19	311	66.2	33.8	26-38
0.3	48	359	76.4	23.6	18-28
0.15	49	408	86.8	13.2	12-20
0.075	35	443	94.3	5.7	4-10

Note:-

The results pertain to the samples received and tested.
All information Furnished by Customer/ Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 90 days from the date of issue of test certificate

ಸಹಾಯಕ ಆಯುಕ್ತರು ಆಯುಕ್ತರ ಕಚೇರಿ ಉಪವಿಭಾಗ ಬೆಂಗಳೂರು-೧೮

CIVIL PRO Sig. Date BANGALORE

FOR CIVIL Pro.

R RUDRAPRASAD
Authorized Signatory
Technical Manager

End of Report

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com
HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL

TEST REPORT OF AGGEGRATE IMPACT VALUE
IS: 2386 Part IV

Lab ID	:	**CP-RW-2019-08-01-03** **Date: 12-07-19**
Customer	:	Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Address	:	Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Project Name	:	Providing Pothole Filling in Ward No.03.
Agency	:	M/S S.M.L.P. Asphalts Prop.BB Umesh, No:385, Bettahalasuru Post, Bangalore North.
Customer Reference	:	EE(YNK.D)E-PMT-03/W.O/60/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	10-07-19
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)
Date of test	:	10-07-19

Sl.No	Particulars of observations	Index	TEST 1	TEST 2
1	Total weight of the surface dry sample sample (passing 12.5 mm and retained on 10mm sieve)	A	300.2	300.2
2	Weight of fraction passing 2.36mm sieve After giving 15 blows	B	73.8	74.1
3	weight of fraction retained 2.36mm sieve After giving 15 blows	C	225.9	225.8
4	Total weight of (B+C) is less than the initial weight (Weight A) by more than one gram the result shall be discarded and a fresh test made.	A-(B+C)	0.5	0.3
5	Aggregate impact value	(B/A)*100	24.6	24.7
6	Aggregate impact value (Mean of two tests)	Pecentage	24.6	

Note:-

The results pertain to the samples received and tested.
All information Furnished by Customer/ Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 90 days from the date of issue of test certificate

CIVIL Pro Sig Date BANGALORE

FOR CIVIL Pro.
R RUDRAPRASAD
Authorized Signatory
Technical Manager

Page 1/1
End of Report

DETERMINATION OF FLAKINESS INDEX AND ELONGATION INDEX OF COARSE AGGREGATE(IS 2386 (Part 1) 1963 (RA 2007)

Lab ID	:	**CP-RW-2019-08-01-03** **Date: 12-07-19**
Customer	:	Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Address	:	Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Project Name	:	Providing Pothole Filling in Ward No.03.
Agency	:	M/S S.M.L.P. Asphalts Prop.BB Umesh, No:385, Bettahalasuru Post, Bangalore North.
Customer Reference	:	EE(YNK.D)E-PMT-03/W.O/60/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	10-07-19
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)
Date of test	:	10-07-19

Result:

Index	Percentage of Flakiness and Elongation Index	Secified limits as per MORTH specification table 400-12
Flakiness Index	12.7%	Combined Flakiness & Elongation Index for WMM is Maximum 35%
Elongation Index	12.5%	
Combined Flakiness and Elongation Index for WMM	25.2%	

Note:-
The results pertain to the samples received and tested.
All information Furnished by Customer/ Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 90 days from the date of issue of test certificate

ಕರ್ನಾಟಕ ರಾಜ್ಯ ಸಣ್ಣ ಕೈಗಾರಿಕಾ ಅಭಿವೃದ್ಧಿ ನಿಗಮ ನಿಯಮಿತ
ಎಸ್.ಎಂ.ಕೃ/ ಬೆಂಗಳೂರು-106

FOR CIVIL Pro.

CIVIL Pro Sig Date BANGALORE

R RUDRAPRASAD
Authorized Signatory
Technical Manager

Page 1/1
End of Report